

WHAT IS CLAIMED IS:

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1. A semiconductor package comprising:
  - a plurality of leads, each of the leads defining:
    - a first surface;
    - a second surface disposed in opposed relation to the first surface; and
    - a third surface disposed in opposed relation to the second surface, the first surface being oriented between the second and third surfaces;
  - a first semiconductor die defining opposed first and second surfaces and including a plurality of bond pads disposed on the first surface thereof, the first surface of the first semiconductor die being attached to the second surface of each of the leads;
  - a second semiconductor die defining opposed first and second surfaces and including a plurality of bond pads disposed on the second surface thereof, the first surface of the second semiconductor die being attached to the second surface of the first semiconductor die;
  - a plurality of conductive connectors electrically connecting the bond pads of the first and second semiconductor dies to respective ones of the leads; and
  - an encapsulating portion applied to and at least partially encapsulating the leads, the first and second semiconductor dies, and the conductive connectors.

2. The semiconductor package of Claim 1 wherein the conductive connectors comprise conductive wires.

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3. The semiconductor package of Claim 2 wherein:
  - the conductive wires comprise first and second conductive wires;
  - the bond pads of the first semiconductor die are electrically connected to respective ones of the first

surfaces of the leads by respective ones of the first conductive wires; and

the bond pads of the second semiconductor die are electrically connected to respective ones of the second surfaces of the leads by respective ones of the second conductive wires.

4. The semiconductor package of Claim 1 further comprising:

a die paddle defining opposed top and bottom surfaces, the leads being disposed about the die paddle;

the first surface of the first semiconductor die further being attached to the top surface of the die paddle.

5. The semiconductor package of Claim 4 wherein:

the first surface of the first semiconductor die is attached to the second surface of each of the leads and to the top surface of the die paddle by a first bonding means; and

the first surface of the second semiconductor die is attached to the second surface of the first semiconductor die by a second bonding means.

6. The semiconductor package of Claim 4 wherein:

the die paddle is formed to have a die paddle thickness;

each of the leads is formed to have a lead thickness between the second and third surfaces thereof; and

the die paddle thickness is substantially equal to the lead thickness.

7. The semiconductor package of Claim 4 wherein the encapsulating portion is applied to the die paddle such that the bottom surface of the die paddle is exposed within the encapsulating portion.

8. The semiconductor package of Claim 7 wherein the

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encapsulating portion is applied to the leads such that the third surface of each of the leads is exposed within the encapsulating portion.

9. The semiconductor package of Claim 1 wherein the encapsulating portion is applied to the leads such that the third surface of each of the leads is exposed within the encapsulating portion.

10. The semiconductor package of Claim 1 wherein the first semiconductor die and the leads are oriented relative to each other such that each of the bond pads of the first semiconductor die is located between a respective pair of the leads so that the bond pads of the first semiconductor die do not contact the second surface of any one of the leads.

11. The semiconductor package of Claim 10 wherein:  
the first semiconductor die defines a peripheral edge; and  
the conductive connectors electrically connecting the bond pads of the first semiconductor die to the leads are oriented inwardly relative to the peripheral edge of the first semiconductor die.

12. A method of fabricating a semiconductor package, comprising the steps of:

a) providing a plurality of leads, each of the leads having a first surface, a second surface disposed in opposed relation to the first surface, and a third surface disposed in opposed relation to the second surface, the first surface being oriented between the second and third surfaces;

b) attaching a first surface of a first semiconductor die to the first surface of each of the leads;

c) attaching a first surface of a second semiconductor die to a second surface of the first semiconductor die;

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d) electrically connecting bond pads disposed on the first surface of the first semiconductor die and a second surface of the second semiconductor die to respective ones of the leads; and

e) applying an encapsulant to the first and second semiconductor dies and the leads to form an encapsulating portion which at least partially encapsulates the first and second semiconductor dies and the leads.

13. The method of Claim 12 wherein step (d) comprises:

1) electrically connecting the bond pads of the first semiconductor die to respective ones of the first surfaces of the leads by respective ones of first conductive wires; and

2) electrically connecting the bond pads of the second semiconductor die to respective ones of the second surfaces of the leads by respective ones of second conductive wires.

14. The method of Claim 12 wherein:

step (a) further comprises providing a die paddle defining opposed top and bottom surfaces, the leads being disposed about the die paddle; and

step (b) further comprises attaching the first surface of the first semiconductor die to the top surface of the die paddle.

15. The method of Claim 14 wherein:

step (b) comprises bonding the first surface of the first semiconductor die to the second surface of each of the leads and the top surface of the die paddle; and

step (c) comprises bonding the first surface of the second semiconductor die to the second surface of the first semiconductor die.

16. The method of Claim 14 wherein step (e) comprises

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applying the encapsulant to the leads such that the third surface of each of the leads is exposed within the encapsulating portion.

17. The method of Claim 16 wherein step (e) comprises applying the encapsulant to the die paddle such that the bottom surface of the die paddle is exposed within the encapsulating portion.

18. The method of Claim 12 wherein step (e) comprises applying the encapsulant to the leads such that the third surface of each of the leads is exposed within the encapsulating portion.

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